

REMARKS

Claims 1-6 are pending in the application. Claim 1 has been amended, leaving claims 1-2 and 4-6 for consideration upon entry of the present amendment. Applicant respectfully requests reconsideration in view of the following amendment and remarks.

Claim 5 stands rejected under 35 U.S.C. § 112, second paragraph, as failing to distinctly claim the subject matter that the applicant regards as the invention. Claim 5 has been revised, thereby rendering the rejection moot. Applicant respectfully requests that this rejection be withdrawn.

Claims 1, 2, 4, and 5 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Kunito (JP 06-032555) in view of Roose (U.S. 5,170,746). This rejection is the same rejection in the previous office action. The Examiner responded to Applicant's argument by stating that the argument was not persuasive because there was no statement in Kunito that actually teaches away from having a slidable bar. In addition, the Examiner states that Applicant does not claim a slidable rail.

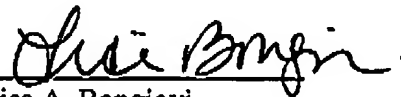
Applicant claims: "a mobile structure comprising at least two bars that are telescopically mounted inside the guard rails, so as to slide between an open position where the bars are inserted within the guard rails, and a closed position where the bars are extended out of the guard rails, wherein the mobile structure is positioned along the edge of the car roof so as to allow access to the controller mounted in the hoistway." Thus, Applicant is claiming a mobile structure that has two bars that slide between an open position and a closed position.

Kunito teaches away from this element. Applicant is submitting herewith a full translation of Kunito. On page 4 of the translation, Kunito explains that the auxiliary working floor pivots toward the wall surface and "[a]s a result, there is no need for sliding members as in the past, and various operations can be carried out using the working floor main body and auxiliary working floor, so that a wide working space can be realized using a simple structure." Thus, Kunito cannot be combined with any reference that teaches sliding members, as Kunito specifically teaches away from having sliding members. Accordingly, the Examiner's rejection is improper and should be withdrawn.

In view of the foregoing, it is respectfully submitted that the instant application is in condition for allowance. Accordingly, it is respectfully requested that this application be

allowed and a Notice of Allowance issued. If the Examiner believes that a telephone conference with Applicant's attorneys would be advantageous to the disposition of this case, the Examiner is cordially requested to telephone the undersigned.

Respectfully submitted,

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May 15, 2006

MAY 16 2006

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application: DET, et al.
Serial No.: 10/517,725
Filed: December 10, 2004
Art Unit: 3654
Examiner: Eric E. Pico
For: SAFETY TOP BALUSTRADE FOR A CAR OF A
MACHINE ROOM-LESS ELEVATOR

SUBMISSION OF ENGLISH TRANSLATION

Commissioner for Patents
P. O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

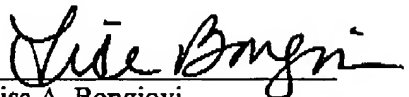
Applicants submit herewith an English translation of Japanese Patent No. 06-032555,
previously submitted, for consideration by the Office.

The Examiner is invited to contact Applicants' Attorneys at the below-listed telephone
number regarding this submission or otherwise regarding the present application.

Respectfully submitted,

Date: May 15, 2006

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Japanese Kokai Patent Application No. Hei 6[1994]-32555

Job No.: 310-107966

Ref.: LAWPACK # OTS016695/OT-5076

Translated from Japanese by the McElroy Translation Company

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JAPANESE PATENT OFFICE
PATENT JOURNAL (A)
KOKAI PATENT APPLICATION NO. HEI 6[1994]-32555

Int. Cl.⁵: B 66 B 7/00
E 04 G 1/36
21/18

Sequence Nos. for Office Use: 9243-3F
7228-2E

Filing No.: Hei 4[1992]-186928

Filing Date: July 14, 1992

Publication Date: February 8, 1994

No. of Claims: 1 (Total of 3 pages)

Examination Request: Not filed

ELEVATOR WORKING FLOOR

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Agents: Kenjiro Take, patent attorney,
and 2 others

[There are no amendments to this patent.]

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Abstract

Objective

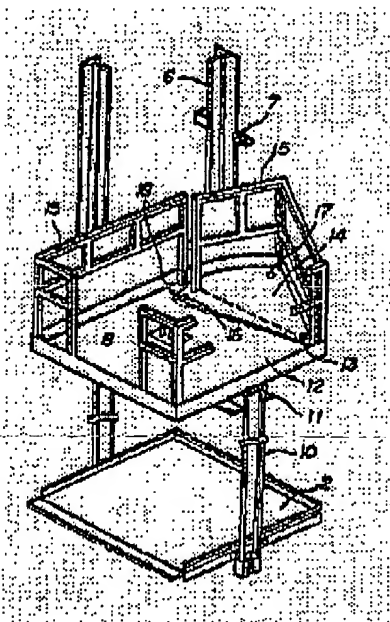
To present a working floor for an elevator by means of which a wide working space can be obtained using a simple structure.

Configuration

A working floor for an elevator that can move vertically in an elevator hoistway comprises working floor main body 12 which is suspended using wire ropes 8 and auxiliary working floor 14 which is attached to said working floor main body 12 such that it can pivot toward wall surface 1a of hoistway 1 around supporting point 13.

Effect

Manufacturing cost can be reduced, and work efficiency can be improved.

Claim

1. A working floor for an elevator that can move vertically in an elevator hoistway, characterized in that it comprises a working floor main body that is suspended using wire ropes and an auxiliary working floor that is attached to said working floor main body such that it can pivot toward a wall surface of the hoistway around a supporting point.

Detailed explanation of the invention

[0001]

Technical field of the invention

The present model pertains to an elevator working floor that is used to install equipment and members in an elevator hoistway.

[0002]

Prior art

During the installation of an elevator, various types of equipment and members, such as brackets used to fix guide rails for guiding an elevator car and a counterweight, are installed on wall surfaces inside a hoistway. Said installation work is performed by workers on a working floor. In such cases, because the hands of the workers must reach the aforementioned wall surfaces, the working floor needs to project out to a wall surface. A conventional working floor for an elevator that can be mentioned is the one described in Japanese Kokai Utility Model No. Sho 63[1988]-31070.

[0003]

Figure 3 is an oblique view showing a conventional working floor for an elevator, and Figure 4 is a plan view of the working floor in Figure 3.

[0004]

The conventional working floor for an elevator is equipped with stationary parts 3a that are fixed on car floor 2 for ultimate installation inside of hoistway 1, sliding bases 3 having sliding parts 3b fitted to stationary parts 3a such that they can slide freely, and working floor 4 provided on top of sliding parts 3b. When installing brackets for fixing guiding rails 6 used to guide counterweight 5, shown in Figure 4, on wall surface 1a, for example, working floor 5 is slid toward wall surface 1a for this work as shown in Figure 3. As a result, the work safety and efficiency can be improved.

[0005]

Problem to be solved by the invention

Incidentally, the aforementioned conventional working floor for an elevator is problematic in that because it requires an engagement mechanism for sliding bases 3 and many members for attaching sliding bases 3 to car floor 2 or working floor 5, the structure becomes complicated and its fabrication is time-consuming. In addition, while the work can be carried out

by sliding working floor 5 toward wall surface 1a of hoistway 1, the shape of working floor 5 is limited, resulting in the problem that the working space is subject to limitations.

[0006]

The present invention was made in view of the current situation with said conventional technology, and its objective is to present a working floor for an elevator by means of which a wide working space can be obtained using a simple structure.

[0007]

Means to solve the problem

In order to achieve said objective the present invention is configured such that a working floor for an elevator that can move vertically in an elevator hoistway comprises a working floor main body that is suspended using wire ropes and an auxiliary working floor that is attached to said working floor main body such that it can pivot toward a wall surface of the hoistway around a supporting point.

[0008]

Function

Because the present invention is configured in this way, the working floor main body suspended by wire ropes is moved vertically inside the hoistway as the aforementioned wire ropes are moved. In addition it has an attached auxiliary working floor, and said auxiliary working floor is housed inside the aforementioned working floor under normal circumstances. Then, when work that is out of reach of a worker is required while the auxiliary working floor is housed within the working floor main body, the aforementioned auxiliary working floor is pivoted toward the wall surface of the aforementioned hoistway around the supporting point, and the worker carries out the work using said auxiliary working floor. As a result, there is no need for sliding members as in the past, and various operations can be carried out using the working floor main body and the auxiliary working floor, so that a wide working space can be realized using a simple structure.

[0009]

Application example

An application example of the working floor for an elevator of the present invention will be explained below based on figures. Figure 1 is an oblique view showing an application example of an elevator working floor of the present invention, Figure 2 is a plan view of the working floor in Figure 1. Here, parts identical to those shown in Figure 3 and Figure 4 are

assigned the same symbols. That is, 1 represents a hoistway, 1a represents a wall surface, 2 represents a car floor, 5 represents a counterweight, 6 represents a guiding rail, and 7 represents a bracket.

[0010]

As shown in Figure 1, the working floor for an elevator of the present application example is equipped with working floor main body 12, which is suspended using wire ropes 8 mounted on crosshead 11 positioned on top of car frames 10 that project from the sides of car floor 2, and auxiliary working floor 14, which is attached to said working floor main body 12 such that it can pivot toward wall surface 1a of hoistway 1 around supporting point 13, as shown in Figure 2. In addition, there are: handrails 15 provided upright at the edges of working floor main body 12 and auxiliary working floor 14, holes 16 and 17 created at the corners other than supporting point 13 of fan-shaped auxiliary working floor 13 [sic; 14], holes (not shown) created in working floor main body 12 such that they can face said holes 16 and 17, and stopper pin 18 to be inserted into said hole 16 or 17.

[0011]

In the present application example, car floor 2, car frames 10, crosshead 11, working floor main body 12, and auxiliary working floor 14 are moved vertically as a unit inside hoistway 1 as wire ropes 8 are moved. During normal circumstances, however, that is, when there is no need for a worker to extend his/her arm out to wall surface 1a to install equipment in hoistway 1, auxiliary working floor 14 is housed inside of working floor main body 12 in the manner indicated by the broken line in Figure 2, stopper pin 18 is inserted into hole 17 created in auxiliary working floor 14 and the hole created on working floor main body 12 in order to fix auxiliary working floor 14, and work is performed under these conditions. On the other hand, when it is necessary for a worker to extend his/her arm to wall surface 1a, for example, when installing brackets 7 for fixing guiding rails 6, auxiliary working floor 14 is rotated toward wall surface 1a around supporting point 13 in the manner indicated by the solid lines in Figures 1 and 2, stopper pin 18 is inserted into hole 16 created in auxiliary working floor 14 and the hole created in working floor main body 12 in order to fix auxiliary working floor 14, and work is performed while standing on said auxiliary working floor 14.

[0012]

Because of this configuration, the present application example requires no sliding member as in the conventional working floor, and auxiliary working floor 14 can be rotated in

order to perform work from working floor main body 12 and auxiliary working floor 14, respectively, so that a wide working space can be realized using a simple structure.

[0013]

Furthermore, when equipment and members to be installed inside hoistway 1 are long, auxiliary working floor 14 can be brought to the pivoted position in order to place the aforementioned equipment and members on working floor main body 12 and auxiliary working floor 14.

[0014]

Effects of the invention

Because the present invention is configured in the aforementioned manner, a wide working space can be realized using a simple structure, resulting in the effects that manufacturing cost can be reduced and work efficiency can be improved.

Brief description of the figures

Figure 1 is an oblique view showing an application example of a working floor for an elevator of the present invention.

Figure 2 is a plan view of the working floor in Figure 1.

Figure 3 is an oblique view of a conventional working floor for an elevator.

Figure 4 is a plan view of the working floor in Figure 3.

Explanation of symbols

- 1 Hoistway
- 8 wire rope
- 12 Working floor main body
- 13 Supporting point
- 14 Auxiliary working floor
- 16, 17 Hole
- 18 Stopper pin

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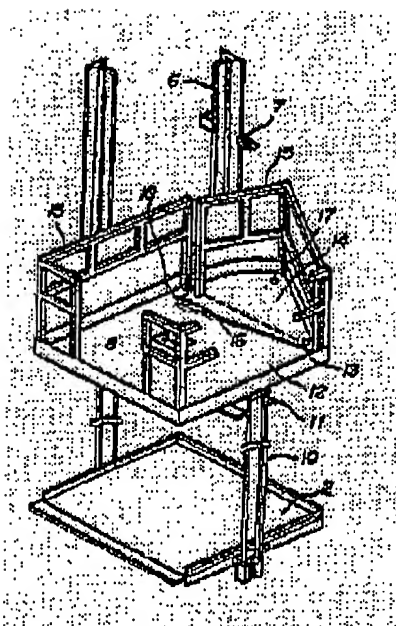


Figure 1

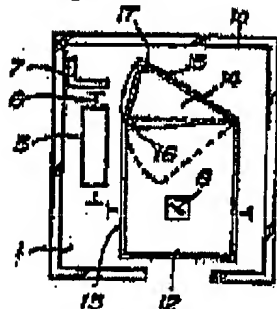


Figure 2

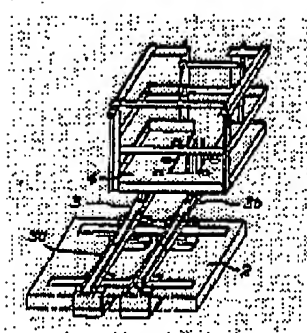


Figure 3

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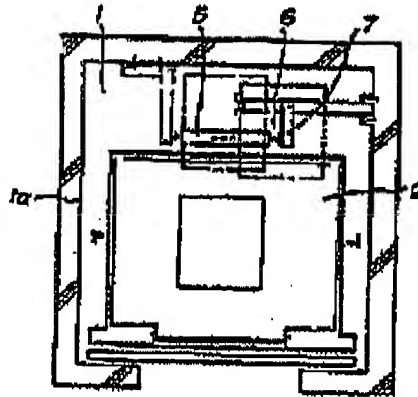


Figure 4